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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/805,509	03/14/2001	Yoshitaka Dansui	L7016.01105	1885

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EXAMINER

WINTER, GENTLE E

ART UNIT

PAPER NUMBER

1746

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5

Please find below and/or attached an Office communication concerning this application or proceeding.

ext 17

Office Action Summary

Application No.

09/805,509

Applicant(s)

DANSUI ET AL.

Examiner

Gentle E. Winter

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 August 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claim 1-3 and 6-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Japanese Publication No. 09-092279. Hereinafter '279.
2. With specific respect to claim 1, disclosing a nickel positive electrode active material comprising nickel hydroxide particles (whose main component is nickel hydroxide) and at least one rare earth compound (ytterbium compound) obtainable by treating a rare earth oxide with an aqueous alkaline solution and an oxidizing agent. See e.g. page 2, column 2, line paragraphs 7-12, and the provided abstract translation.
3. With specific respect to claim 2, disclosing that the rare earth compound is at least one selected from the group consisting of an ytterbium compound (ytterbium compound) obtainable by treating ytterbium oxide with an aqueous alkaline solution and an oxidizing agent. See e.g. page 2, column 2, line paragraphs 7-12, and the provided abstract translation.
4. As to claim 3, disclosing that the total amount of the rare earth compound is in the range of 0.1 to 4.0 wt % based on the nickel hydroxide particles. The '279 reference in

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paragraph 7 discloses that Yb_2O_3 is present in the nickel hydroxide at 2.5 Wt. %. See e.g. paragraph 0007.

5. As to claims 6 and 7, the recitation of the type of hydroxide or oxidizing agent is not relevant to the invention. Applicant only indicates that the rare earth is "obtainable by treating" a rare earth oxide with an aqueous alkaline solution and an oxidizing agent. This recitation only requires that the rare earth be obtainable in the indicated manner. Since the rare earth elements disclosed in the dependant claims come within this requirement, the limitation is inherently met.

6. As to claim 8, disclosing a nickel metal hydride storage battery comprising a positive electrode mainly composed of a positive electrode active material of claim 1, a negative electrode mainly composed of a hydrogen-absorbing alloy and a separator. The positive electrode active material of claim 1 is discussed above with respect to claim 1. The recitation of a "negative electrode mainly composed of a hydrogen-absorbing alloy and a separator" is disclosed in paragraph [0016] disclosing that the in nickel hydride battery of the invention, the alloy corrosion of a hydrogen storing metal alloy negative electrode is reduced, and an improved battery life cycle is obtained.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

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the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over '279 as discussed above and United States Patent No. 6,136,473 Furukawa et al.

Hereinafter Furukawa.

8. With specific respect to claims 4 and 5, further limiting claim 2, and disclosing that the rare earth compound is a combination of the yttrium/ytterbium compound and the lutetium compound, wherein the two compounds meet $50 \geq X \geq 5$, when weights of the yttrium compound and the lutetium compound are $(100-X) \%$ by weight and $X \%$ by weight, respectively. Each and every limitation of claim 4 is disclosed in '279 as set forth above, except that the '279 reference fails to explicitly disclose that the rare earth combination is yttrium-lutetium compound and ytterbium-lutetium compound. Wherein the two compounds (Y/Yb-Lu) meet $50 \geq X \geq 5$, when weights of the yttrium (or ytterbium) compound and the lutetium compound are $(100-X) \%$ by weight and $X \%$ by weight, respectively. Furukawa discloses that two or more kinds of selected rare earth elements are ytterbium and lutetium, and a ratio of the content of ytterbium to the contents of ytterbium and lutetium is larger than or equal to 0.75 when converted to an amount of oxide. See e.g. column 5, line 44 *et seq.* also see e.g. column 28, lines 5-10. Ytterbium is disclosed as a specific example of a rare earth, Y, is also disclosed as a desirable rare earth. The artisan would have been motivated to make the instant combination for the reason explicitly disclosed in Furukawa, namely, a composite compound having Yb and Lu as its principal component, for example, is inexpensive

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because it is formed as an eutectoid when separating and forming the rare earth element from ore. See e.g. column 5, line 51 *et seq.* Additionally the artisan would have been motivated to make the combination because Y, Ho, Er, Tm, Yb and Lu etc. have an effect of shifting the oxygen evolution potential to a more noble potential, thus reducing the likelihood of gas evolution during overcharging. See also column 25, line 48-54, disclosing Yb and Lu and optionally Y.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
10. A sealed alkaline storage battery using, as a positive electrode active material, nickel oxyhydroxide. A sealed alkaline storage battery using, as a positive electrode active material, nickel oxyhydroxide including as an additive or coated with a rare earth element and/or a rare earth compound in a ratio measured based on the rare earth element of 0.05 through 5 wt %; and a sealed alkaline storage battery including, as a positive electrode active material, nickel oxyhydroxide.
11. EP 0 996 182 and JP 133259 is considered to be an anticipatory reference to at least claim 1-3 and 6-8 and largely cumulative with the references cited. The European Search Report would similarly provide the basis for an obviousness rejection of claims 4 and 5 when combined with any number of references. There is apparently nothing in the instant application that disclosing why the disclosed ranges are material, the disclosed ranges are apparently nothing more than the blanket recitation of literally hundreds of ranges going from 95A:5B-5A-95B. The artisan would have considered a 50:50 range to

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be a reasonable starting point in series of non-inventive, routine experiments in design optimization. In fact the disclosed range covers just about every range that would be undertaken in a non-inventive, routine design optimization process.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gentle E. Winter whose telephone number is (703) 305-3403. The examiner can normally be reached on Monday-Friday 7:00-3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy P. Gulakowski can be reached on (703) 308-4333. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications. The direct fax number for this examiner is (703) 746-7746.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Gentle E. Winter
Examiner
Art Unit 1746

April 8, 2003


RANDY GULAKOWSKI
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